

Venous aneurysm at the splenomesenteric confluence at the level of portal vein emergence: a case report*

Aneurisma venoso na junção esplenomesentérica e emergência da veia porta: relato de caso

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Abstract Aneurysms in the splenoportomesenteric system constitute a rare entity whose etiology is still to be determined. Predisponent factors include portal hypertension, chronic hepatic disease and trauma, among others. The authors present a case of an aneurysm at the splenomesenteric confluence where it joins the portal vein, in a female, 62-year-old patient with no predisponent factor.

Keywords: Aneurysm; Portal vein; Splenic vein; Mesenteric veins.

Resumo Os aneurismas no sistema esplenoportomesentérico são uma entidade clínica rara e de etiologia desconhecida, tendo como fatores contribuintes hipertensão portal, doença hepática crônica e trauma, entre outros. Os autores apresentam os achados de imagem de um caso de aneurisma na junção esplenomesentérica ao nível da emergência da veia porta, em uma paciente de 62 anos de idade sem fatores predisponentes.

Unitermos: Aneurisma; Veia porta; Veia esplênica; Veias mesentéricas.

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INTRODUCTION

Aneurysms at the splenoportomesenteric junction constitute a rare clinical entity, with a case of splenic vein aneurysm being first described in the literature in 1953 by Lowenthal & Jacob⁽¹⁾. Only 40 cases have been described to date.

Aneurysms etiology still remains unknown, and their origin may be congenital or acquired⁽²⁾. This entity may be asymptomatic or can lead to severe conditions such as colicky abdominal pain, jaundice and digestive bleeding secondary to portal hypertension. Chronic liver disease, portal hypertension, trauma or inflammation constitute contributing factors in cases of secondary aneurysms^(2,3).

Vessel wall weakening due to trauma, inflammatory conditions such as pancreati-

tis or local degenerative alterations have also been implicated in the genesis of splenic vein dilatation.

The diagnosis is usually achieved by B-mode or color Doppler ultrasonography, computed tomography and magnetic resonance imaging. Invasive procedures such as venous phase mesenteric arteriography or splenoportography may aid the diagnosis⁽⁴⁾.

CASE REPORT

A female, caucasian, 62-year-old patient coming from Ribeirão Preto, SP, Brazil, with diabetes mellitus was referred for in-

vestigation of abdominal mesogastric pain by ultrasonography and later by computed tomography.

At ultrasonography, a sacular, hypoechoic image was observed in the splenomesenteric junction. Doppler flow study demonstrated a venous pattern of the blood flow and turbulent venous flow within the lesion (Figure 1).

With the progress of the investigation, the patient underwent computed tomography scan that demonstrated a 5.2 × 4.0 cm round-shaped formation in the confluence of the splenic and superior mesenteric veins at the level of the portal vein emergence, with vascular pattern enhancement. This

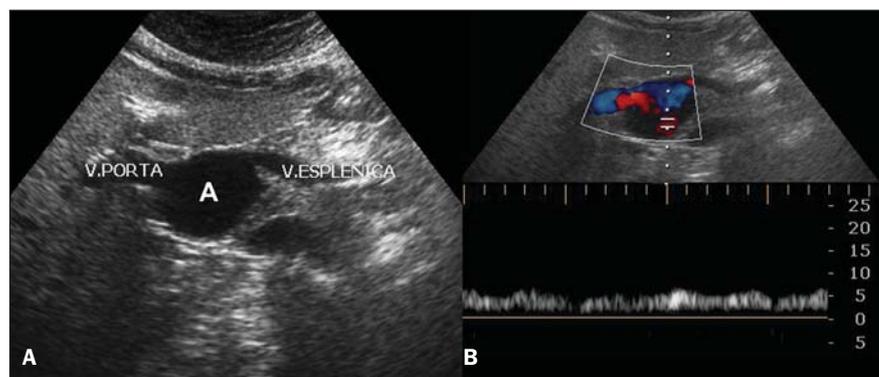


Figure 1. A: Ultrasonography demonstrating sacular, hypoechoic image (A) on the splenomesenteric confluence. B: Doppler flow study demonstrating turbulent flow within the lesion.

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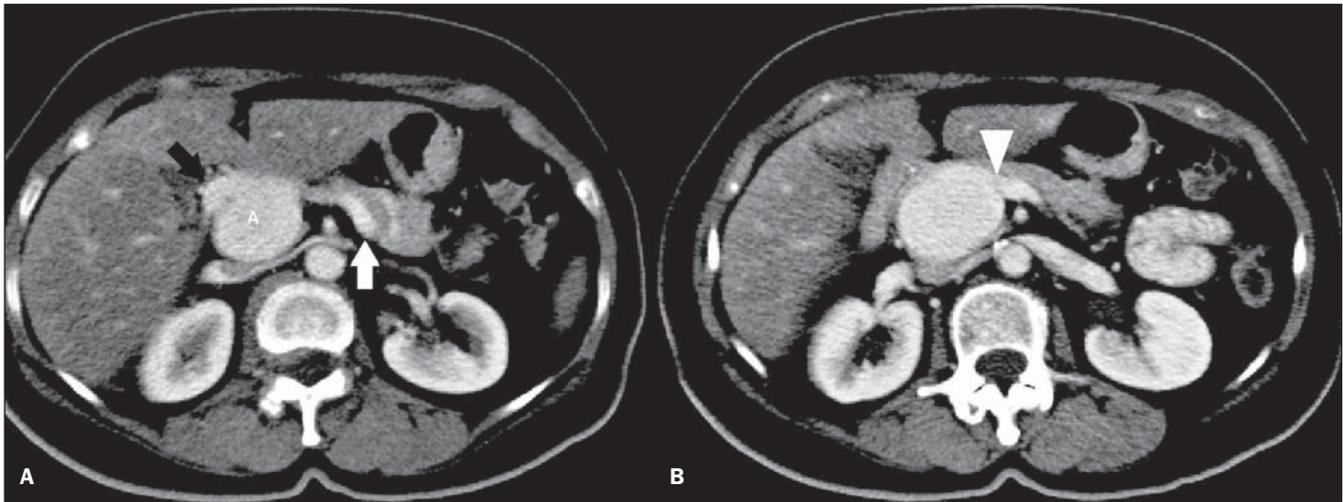


Figure 2. A: Contrast-enhanced computed tomography image demonstrating a round-shaped mass (A) in the confluence of the superior mesenteric, splenic veins (white arrow) and the emergence of the portal vein (black arrow), with enhancement similar to these vessels. **B:** Notice the communication between the splenic vein and the lesion (arrowhead).

mass caused compression over the pancreatic head, inferior vena cava and right renal vein (Figures 2, 3 and 4).

Clinical evaluation ruled out portal hypertension, hepatopathies or jaundice as clinical or laboratory findings, thus a cause for these alterations has not been found.

DISCUSSION

Venous aneurysms are atypical malformations rarely found in the usual clinical practice. Most of times, these lesions are located in the cervical region and lower limbs⁽⁵⁾; and among visceral aneurysms, those affecting the portal venous system are the most frequently found^(4,6,7).

The etiology of splenoportomesenteric confluence aneurysms still remains unknown, and congenital and acquired causes such as portal hypertension, cirrhosis, inflammation, arteriovenous fistulas and previous trauma have been postulated for this abnormality^(2,4,7). However, not all the patients with portal hypertension develop aneurysmatic dilatations, so it seems there may be a multifactorial mechanism of action.

With regard to clinical manifestations, most splenic vein aneurysms are asymptomatic, constituting incidental findings in abdominal investigations⁽⁴⁾.

The natural history and behavior of splenoportomesenteric axis aneurysms still remain unknown. Complications such as

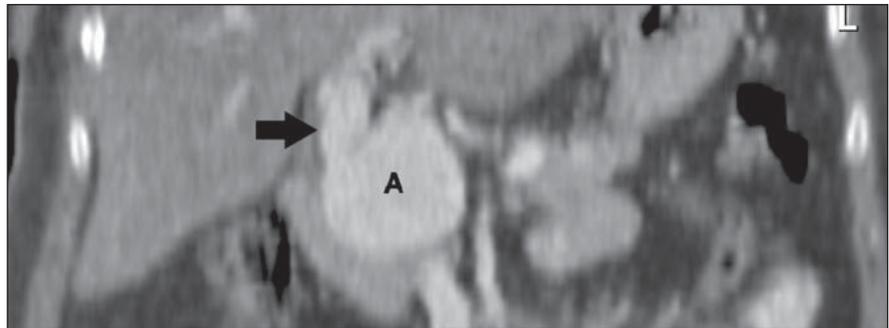


Figure 3. Coronal CT reconstruction demonstrating the communication between the lesion (A) and the emergence of the portal vein (arrow).

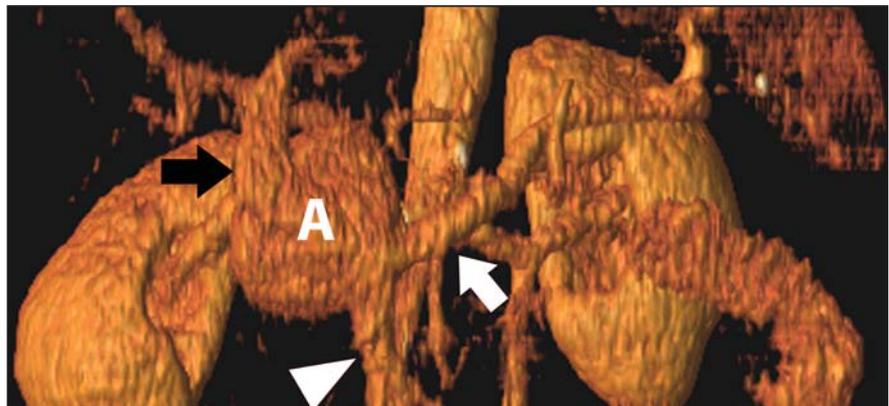


Figure 4. Three-dimensional reconstruction. Aneurysmatic dilatation (A), splenic vein (white arrow), portal vein (black arrow), superior mesenteric vein (arrowhead).

rupture, thrombosis, compression of adjacent structures and gastrointestinal bleeding secondary to esophageal varices have been described in the literature.

CONCLUSION

Splenoportomesenteric axis aneurysms have been already considered extremely rare, but currently constitute a well docu-

mented clinical entity, although representing only 3% of the cases of venous system aneurysms⁽⁸⁾.

The diagnosis can be achieved by color Doppler study demonstrating the venous flow within the aneurysmatic cavity, except in the case of thrombosis. Contrast-enhanced helical computed tomography, besides providing information on the mass and adjacent structures, can offer three-dimensional images, allowing an accurate diagnosis⁽⁹⁾.

The choice of conservative or surgical management depends on several factors. For the majority of authors, in cases of portal hypertension, the most appropriate treatment seems to be the placement of a porto-

systemic shunt⁽⁴⁾. Controversy emerges in cases where portal hypertension is not present. In the present case, the gastric surgeon decided for an expectant strategy, with periodic imaging follow-up, considering that the patient presented intermittent clinical signs, without any other findings.

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